

OH, RANGER!®

True Stories from our National Parks

EDITED BY
Mark J. Saferstein

2007

In Search of Bear Scat

by Todd Nelson

It was my sixth and final season as the Manning Camp ranger in Saguaro National Park. Working ten days straight, then taking four days off, I always started back to work about 4:30 a.m., hiking up out of the Saguaros to the vanilla-scented ponderosa pine forest. I left early, at least an hour before the sun came over the ridge, because the moment the sun rose, the temperature would begin to climb. The lows during the summer nights usually hovered around the high 70s to low 80s, but at dawn the temperature immediately felt 10-15 degrees warmer.

My commute involved a four-hour trek through six life zones of the Sonoran Desert, 9.3 miles of hiking, up 4,500 feet in elevation to the pine forest at 8,000 feet. Part of the trail was like walking up never-ending flights of stairs; in fact, there are actual steps cut into parts of the trail. At the end of the climb was Manning cabin, my home for yet another ten days in the cool mountain air. At the end of ten days, I would again hike down for four days off. This was a five-month-long ritual that I enjoyed for six summers.

As the Manning ranger I had many duties: I managed the comings and goings of staff, worked as a wildland firefighter, purified water for drinking, responded to medical needs and repaired trails. One of my favorite duties involved working with researchers.



A study conducted by investigators at Saguaro National Park and the University of Arizona involved collecting bear droppings ("scat"). The object of the study was to find out how many black bears were living in the Rincon Mountains in the park. The project was part of a larger study, which sought to document bear migration patterns in southeast Arizona. My job was to collect scat samples, photograph them and record their size. The

investigator planned to collect bear tissue cells from the scat. The cells from each sample would be tested for DNA. The DNA evidence from the scat samples could be linked to individual bears, which in turn would provide an estimate of the number of bears in the Rincon Mountains.

One day, I decided to search for scat on the North Slope Trail. It is on a remote section of the mountain, where I had always come across a lot of bear scat in the past.

In June of 2003 a fire in the area had burned really hot in some sections, leaving a moonscape after it passed. Two years after the fire, portions of the trail were badly eroded and it was hard to find any sign of it. Even though I was familiar with the trail after hiking it at least a dozen times, I found that it was easy to get off trail for a short period. I decided to start at the west end because that is where it is the trickiest.

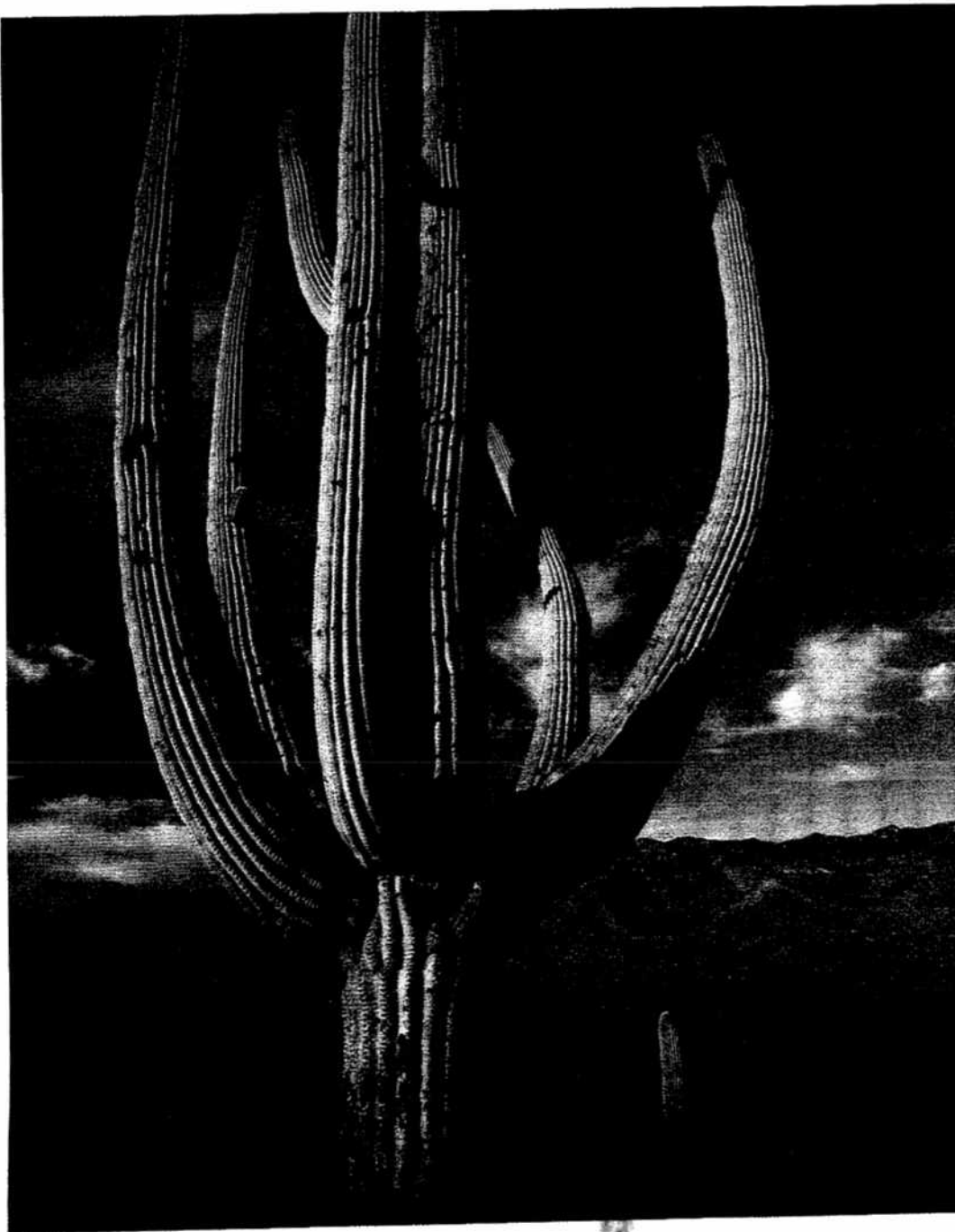
Since I would be working alone, I did a few things to help ensure my safety before I left the cabin. I secured a can of bear spray on my pack within easy reach. I put my battery-powered park radio on my waist clip for easy reach and tossed a set of fresh backup batteries into my pack. I made sure that I had plenty to drink and eat. Most importantly, I marked my planned route on the Plexiglas-covered topographic park map on the wall.

It was a beautiful day for hiking; the blue sky was dotted with a few puffy clouds, the wind was blowing through the trees (my favorite sound), and, best of all, I was being paid to hike! (OK, I was being paid to hike and pick up bear poop, still, not bad!) Less than a mile up the North Slope Trail and... success! I could almost see the steam rise off a black/brown mass filled with acorn shells! Fresh! There were no tracks on the trail, so I couldn't tell what direction the bear was traveling, but I knew that it had been right in this spot only a short time ago. I turned on the GPS unit to record the location and then got out the rest of my equipment—rulers, markers, camera, notebook and a baggie (you can guess what goes in there). On the baggie I noted all the pertinent information, including the mass, width, length and height. I took a picture and, using the baggie as a glove, retrieved the sample. I then sealed the bag and tossed it into my pack.

After about an hour, I came to a section of the trail that was hard to follow. I debated which way to go. After a few minutes of searching, I picked a route near a rock outcropping and again began to look for scat. I quickly found another fresh pile. I put my pack down and started the collection ritual again, but then I saw another and another and another—a

Science & Discovery

TOM GATACHE



Saguaro National Park

ple
to
the

ote
ing
lly
rail
ort

ore
my
sh
ost
ap

ds,
ng
ess
off
so
ht
nd
gie
n,
a

ed
ng
vn
-a

total of nine! Nine fresh piles of poop! I was definitely earning my pay today!

With all that fresh scat, I started to worry about what might be waiting for me just down the trail on the other side of the rocks ahead. I radioed the visitor center to let them know where I was and what I was doing. I promised to contact them again in 30 minutes to let them know I was okay.

What was going on? How could nine separate deposits have been made at nearly the same time? Bears don't hang out in groups! Soon after mating, the male and female go their separate ways and the female raises the young on her own. Cubs travel with their mother for 18 months and a sow usually has two cubs. Two of the scat samples appeared to be from adults, others from juveniles and others from cubs. I knew that this was virtually impossible, as sows only breed every other year. Even so, I started to imagine all nine bears in one spot and got really nervous. My imagination worked overtime with possible scenarios, none of which involved me ending up as a healthy, old ranger.

Over the next two hours I radioed the visitor center every 30 minutes to let them know that I was still alive and working. As I was collecting the data for each specimen, I looked up nervously and often to see if I could spot bears. Each time I heard the slightest noise, I nearly hurt myself trying to see where the sound came from.

Having already collected the nine samples, I decided to hike all the way around the rock outcropping. I radioed the visitor center with GPS coordinates—just in case. I had made very little noise during the collection process, hoping that it was true that bears hear only moderately well. Their sense of smell is really good, though, so I should have noticed which way the wind was blowing, but I didn't. My mind was elsewhere! Each time I came around parts of the rock outcropping, I wondered, with my heart in my throat, what was going to be there. I was almost back to my pack—having walked all the way around the rocks—and had found no more scat and no bears at all. I kept imagining what it was like just a few hours before I arrived.

Heading uphill toward the trail, I found yet another pile, but it was not as fresh. As I lifted the sample I could see that maggots had moved in; hard on the outside, but gooey on the inside, good for them I guess. I radioed the visitor center to let them know that I was leaving the area and that I would contact them again later. I came to another section of the trail with a rock outcropping next to it. The last one was so productive that I decided to search near this one too. I found three more samples; all had been there a long

Science & Discovery

time and were hard and light. Into my pack they went.

I never did come upon a gathering of bears—what an experience that could have been! But the truth is that I was relieved. Even though it's well known that black bears rarely hurt people, I was not prepared to be the only human in a group of nine bears. The memories of that day will stay with me for a very long time.